DEVELOPMENT OF A COLLEGE PLACEMENT WEB SITE USING THE MEAN STACK

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Abstract:
Placements can bring a wide range of benefits and opportunities. Training and management of placement is a crucial part of an education a l institution. Our website with the help of latest technology called "MEAN Stack" which is state das Mongo DB, Express JS, Angular, Node JS and Application program Interface(API) is the heart of our project .We use Angular as front-end and Express JS and Node JS as back-end to our website which improves the performance of our application. The main aim of this application is to provide detail view of students who got placed indifferent companies, details of placement committee of that educational institute, training programs that were conducting, placement statistics, information about the recruiters and some career guidelines. College Placement Guide Website is a static website in which admin can view and download the information about the student Recruitment. The paper presents the implementation details, challenges faced, and the future scope of the website.

1.Introduction:

College placement is a crucial aspect of the student's career. College Placement Guide websit egives the detail information about the students placed in the past few years. Students can take thes ample mock tests in this website based on the different companies under drives section. Admin can login and create them ocktests with exam title, description and few more details. In the about page students can know about the training placement officers information, recruiters information of that college. And in the training section users can know about the training programs,workshops andother technical programs conducted in that college.

2.Related Work:

The current college placement website contains the statistics of placements of that college.It requires more human involvement in adding the data .So it is time consuming process.It is most important to create user friendly interface.Due to system flaws, these errors cause significant maintenance issues and student dropout. Manual labor makes documenting and categorizing extremely tough. These analytical techniques[5] result in complicated administration and high analytical expenses, making the system costly and inefficient.

3.ProposedMethod:

Development of College Placement GuideWebsite:

To develop a college placement website using the MEAN stack, we need to follow the below steps:

Step1:Set up the Development Environment We need to install NodeJS, Mongo DB,and Angular JS. After installing these technologies, weneed to set up the development environment andcreateanew project.

Step2:Design the Database We need to design the data bases chema and createa database using MongoDB. The database[6] should have collections for students, companies, and job openings.

Step3:ImplementtheServer-SideCode

We need to use Express JS to create REST ful APIs that can interact with the database.

TheAPIsshould be able to perform CRUD (Create, Read,Update, Delete) operations on the database. Wealso need to implement authentication andauthorization to restrict access to certainresources.

Step4:DeveloptheClient-SideCode

We need to use AngularJS to develop the client-sidecode.

The client-side code should interact with the server-side APIs to display data to the user. Weneed to implement features such as searching for job openings, applying for jobs, and tracking thestatusof job applications.

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Step5:Deploythe Application

We need to deploy the application on a cloud platform such as AWS or Heroku. We also need toconfigure the application to use HTTPS to ensurethesecurityof user data.

3.1   Methodology:

The website is developed using the agilemethodology. The agile methodology is a popularapproachtosoftwaredevelopmentthatemphasizescollaboration,flexibility,andincremental development[7]. The agile methodologyallows for the development team to adapt tochanges quickly and deliver a working product inshort iterations. The website is designed usingresponsive design. Responsive design is anapproach to web design that allows the website toadapt to different screen sizes. The website isdesigned to provide a seamless user experienceacross different devices such as mobile, tablet, anddesktop.

3.2 TechnologiesUsed:

The MEAN stack is a popular web developmentstack that comprises four technologies: MongoDB, Express JS, Angular JS, and Node JS. It is afull-stack JavaScript framework that allowsdeveloperstobuilddynamicwebapplications. Mongo DB is a NoSQL database that stores data in JSON like documents. It is a flexible and scalable database that allows developers to and retrieve data easily. Express JS[8] is a back-endweb framework that helps developers build webapplicationsquickly.Itprovidesvariousfeatures,such as   middleware   support,   routing, andtemplating engines. Angular JS is a front-endframework that allows developers to createdynamicandinteractivewebapplications. Itisa powerful framework that provides two-way data binding, dependency injection, and modularization[9]. Node JS is a run time environment that allows developers to run JavaScript on the server-side. It provides an event- driven architecture and nonblocking I/O operations.

4.Results and Discussion:

The website was successfully built using the MEAN stack, and all its functionalities were tested successfully. The website provides a user- friendly interface for both students and recruiters to interact seamlessly. The website also provides statistical analysis of the placement activities, which[10] can be used by the administrators to make informed decisions. The website was also found to be scalable and can handle a large number of users simultaneously.
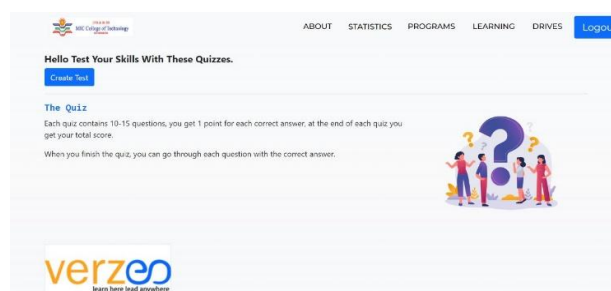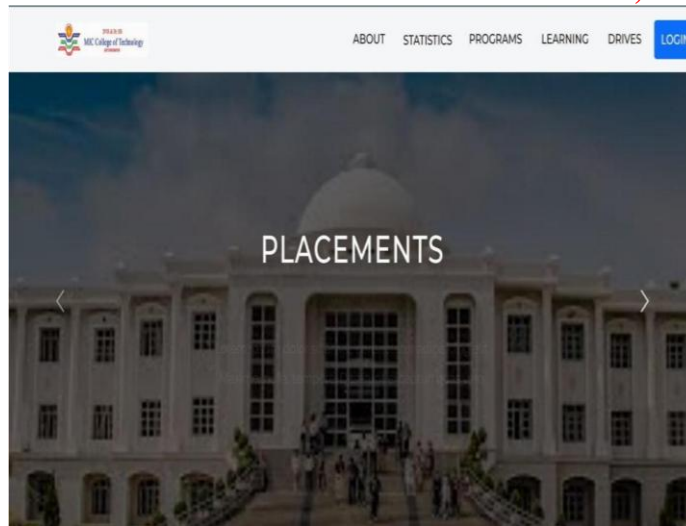

Figure 1: Home Page

Figure 2: Statistics
Page

Figure 3: About Page

Figure 4: Drives Page

6.Conclusion:

The development of a college placement website using the MEAN stack can help streamline college placement process. The website can provide a platform for students to find job opportunities and for employers to post job openings. The website is developed using the agile methodology and implements responsive design for better user experience. The website uses MongoDB, Express, Angular JS, and Node js as the technology stack.

6.1 Future Work:

Future work includes improving the recommendation engine to suggest suitable job openings for students based on their skill set, providing a chat bot for instant communication between the recruiters and the students, and integrating the website with social media platforms to increase its reach.The website can be further improved by implementing features such as job recommendation systems and automated resume screening.

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